

REMARKS

The Office Action dated May 24, 2004, has been received and reviewed.

Claims 1-35 are currently pending and under consideration in the above-referenced application, each standing rejected.

New claims 36-77 have been added.

Reconsideration of the above-referenced application is respectfully requested.

Examiner's Interview

In the Examiner's Interview, conducted on June 15, 2004, a variety of potentially patentable elements were discussed. Each of these elements has been incorporated into the claims of the above-referenced application, either by amendment or by the addition of a new claim. These elements are identified, and their patentability discussed, in further detail hereinafter.

Rejection Under 35 U.S.C. § 112, Second Paragraph

Claim 26 stands rejected under 35 U.S.C. § 112, second paragraph, for reciting subject matter that is allegedly indefinite.

In particular, the Office has asserted that the sheet of material mentioned in claim 26 is not part of the invention recited in claim 26. While the Office's assertion is correct, the mention of a sheet of material in claim 26, which has been made merely to provide a reference point as to the distance a cutting edge protrudes from a surface of a substantially planar plate, does not render claim 26 indefinite. Rather, the reference in claim 26 to a sheet of material provides one of ordinary skill in the art with a ready understanding of the metes and bounds of that claim.

It is, therefore, respectfully submitted that, under 35 U.S.C. § 112, second paragraph, claim 26 is in condition for allowance. Withdrawal of the 35 U.S.C. § 112, second paragraph, rejection of claim 26 is, accordingly, respectfully requested.

Rejections Under 35 U.S.C. § 102

Claims 1, 6-8, 11, 12, 17, 18, 23, 26-29, 34, and 35 stand rejected under 35 U.S.C. § 102(b) for reciting subject matter which is purportedly anticipated by that described in U.S. Patent 4,537,588 to Ehlscheid et al. (hereinafter "Ehlscheid").

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single reference which qualifies as prior art under 35 U.S.C. § 102. *Verdegaal Brothers v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Ehlscheid describes a die which is configured to be used on a rotary press. The die of Ehlscheid has a curvature which facilitates securing of the die to a partially cylindrical drum. The drum is part of a rotary press, which, as is well known in the art, is a heavy piece of industrial equipment, typically weighing several hundred pounds. In addition to being curved, the die of Ehlscheid includes opposite edges that are bent toward one another. FIG. 2; col. 3, lines 38-41. These inwardly bent edges are configured to be engaged by corresponding features of the drum and, thus, facilitate securing of the die to the drum. Col. 3, lines 39-44. The curvature and the bent edges of the die guarantee that the die is accurately clamped to the drum and that the holes in the die register with corresponding holes in the drum. Col. 3, lines 38-44. In addition to the bent edges, screws and clamps secure the die of Ehlscheid to a drum. *Id.*; col. 4, lines 13-21.

Holes are formed within the confines of the cutting edges of the die described in Ehlscheid so that a vacuum may be applied to paper to hold the same in place relative to the die and a drum by which the die is carried during cutting. Col. 4, lines 22-30. Such holes are necessary because it is not desirable for a cutout to be immediately ejected from the die once a sheet of material has been cut. The holes in the die also facilitate the application of a positive pressure to a cutout piece of paper to remove the same from the die at a desired point in time following cutting. Col. 4, lines 27-30.

The die described in Ehlscheid has a total thickness of 0.5 mm, which is equal to 20 mils, or 0.02 inch. Col. 3, lines 19-21. The heights of the cutting edges of the die are 0.3 mm, which

is equal to 12 mils, or 0.012 inch. Col. 3, lines 30-32. The backing of the die disclosed in Ehlscheid has a thickness of 0.2 mm, which is equal to 8 mils or 0.008 inch. Col. 3, lines 25-27.

Notably, dies that are configured for use in rotary presses, which have thin, chemically etched configurations such as those described in Ehlscheid, are not configured to be used by individuals. Because the backings of such dies are flexible and, thus, relatively thin (*e.g.*, the backing of the Ehlscheid die is only 0.2 mm, or 8 mils thick), the edges of the backings of such dies are razor sharp. Consequently, such dies tend to cut even the fingers of industrial handlers that have been trained to secure such dies to and remove them from rotary presses.

Independent claim 1, as amended and presented herein, recites a die for forming patterns from a sheet of material. The die of amended independent claim 1 includes a substantially rigid, planar plate, which is configured to be secured by an individual to a portable die cutting apparatus configured to be transported by the individual. In addition, the die of amended independent claim 1 includes at least one cutting edge protruding from a surface of the substantially planar plate. The at least one cutting edge protrudes from the surface of the substantially planar plate a distance of about 0.015 inch to about 0.02 inch.

Ehlscheid does not expressly or inherently describe, or anticipate, several of the elements that are recited in independent claim 1, as amended and presented herein.

Specifically, Ehlscheid does not expressly or inherently describe that the die thereof comprises “a substantially rigid, planar plate . . .” Instead, Ehlscheid describes a die which has a backing that is 8 mils thick, which would be relatively flexible.

Moreover, the die of Ehlscheid is not substantially planar. Rather, it has a curvature and is bent to include two inwardly extending edges. FIG. 2; col. 3, lines 38-41.

Additionally, the die of Ehlscheid is not “configured be secured to a *portable* die cutting apparatus.” Rather, the description of Ehlscheid is limited to dies that are configured to be secured to large industrial rotary presses.

Further, the description of Ehlscheid is limited to dies that have cutting edges with heights of 0.012 inch, not the “about 0.015 inch to about 0.02 inch” height recited in independent claim 1.

Therefore, Ehlscheid does not anticipate each and every element of amended independent claim 1. Accordingly, it is respectfully submitted that, under 35 U.S.C. § 102(b), amended independent claim 1 recites subject matter which is allowable over that described in Ehlscheid.

Each of claims 6-8, 11, 12, and 17 is allowable, among other reasons, for depending either directly or indirectly from claim 1, which is allowable.

Claim 11 is additionally allowable since Ehlscheid includes no express or inherent description of a die with a substantially planar plate that has a thickness of about 0.01 inch (about 0.25 mm). Rather, the 0.2 mm, or 8 mils or 0.008 inch, thickness of the die backing described in Ehlschied is less than the about 0.01 inch recited in claim 11, and would result in a backing which is flexible, not substantially rigid, as recited in amended independent claim 1.

Independent claim 18 is directed to a die for forming patterns from a sheet of material. As amended and presented herein, the die of independent claim 18 includes a portable, substantially rigid, planar plate configured to be completely supported by a planar surface of a portable press, as well as at least one cutting edge. The at least one cutting edge protrudes a distance of about 0.015 inch to about 0.02 inch from a surface of the substantially planar plate.

There are several elements of amended independent claim 18 that are not anticipated by Ehlscheid.

In particular, Ehlscheid does not expressly or inherently describe that the die thereof comprises “a substantially rigid, planar plate . . .” Instead, Ehlscheid describes a die which has a backing that is 8 mils thick, which would be relatively flexible.

Moreover, the die of Ehlscheid is not substantially planar. Rather, it has a curvature and is bent to include two inwardly extending edges. FIG. 2; col. 3, lines 38-41.

Ehlscheid also lacks any express or inherent description that the die thereof is configured to be “completely supported by a planar surface of a portable press . . .” Rather, the description

of Ehlscheid is limited to dies that are configured to be supported by a drum of a large, industrial rotary press.

Further, the description of Ehlscheid is limited to dies that have cutting edges with heights of 0.012 inch, not the “about 0.015 inch to about 0.02 inch” height recited in independent claim 18.

Therefore, Ehlscheid does not anticipate each and every element of amended independent claim 18. As such, amended independent claim 18 is directed to subject matter which, under 35 U.S.C. § 102(b), is allowable over the subject matter disclosed in Ehlscheid.

Claims 23, 26-29, 34, and 35 are each allowable, among other reasons, for depending either directly or indirectly from claim 18, which is allowable.

Claim 28 is additionally allowable since Ehlscheid includes no express or inherent description of a die with a substantially planar plate that has a thickness of about 0.01 inch (about 0.25 mm). Rather, the 0.2 mm, or 8 mils or 0.008 inch, thickness of the die backing described in Ehlschied is less than the about 0.01 inch recited in claim 11, and would result in a backing which is flexible, not substantially rigid, as recited in amended independent claim 1.

Claim 29 is further allowable because the dies that are described in Ehlscheid do not have thicknesses of about 0.03 inch. Instead, the description of Ehlscheid is limited to dies that have total thicknesses of 0.5 mm, which is equal to 20 mils, or 0.02 inch. Col. 3, lines 19-21.

Claim 35 is also allowable since Ehlsched includes no express or inherent description of a die that includes a substantially planar plate configured to be secured to a portable die cutting apparatus. Rather, the description of Ehlscheid is limited to relatively flexible dies with sharp cutting edges that are configured for use with industrial-sized rotary presses.

For these reasons, withdrawal of the 35 U.S.C. § 102(b) rejections of claims 1, 6-8, 11, 12, 17, 18, 23, 26-29, 34, and 35 is respectfully solicited.

Rejections Under 35 U.S.C. § 103(a)

Claims 2-5, 9, 10, 13-16, 19-22, 24, 25, and 30-33 stand rejected under 35 U.S.C. § 103(a) for reciting subject matter which is assertedly unpatentable over that taught in Ehlscheid, in view of purported prior art.

The standard for establishing and maintaining a rejection under 35 U.S.C. § 103(a) is set forth in M.P.E.P. § 706.02(j), which provides:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Secondary considerations of nonobviousness include “commercial success, long felt but unsolved needs, failure of others, etc.” M.P.E.P. § 2141, quoting *Graham v. John Deere*, 383 U.S. 1, 148 USPQ 459 (1966).

Each of claims 2-5, 9, 10, and 13-16 is allowable, among other reasons, for depending either directly or indirectly from claim 1, which is allowable.

Claims 19-22, 24, 25, and 30-33 are each allowable, among other reasons, for depending either directly or indirectly from claim 18, which is allowable.

Claims 2 and 19 are further allowable because Ehlscheid lacks any teaching or suggestion of an ejection element that is associated with a surface of a substantially planar plate of a die and configured to immediately force a sheet of material from a location laterally adjacent to the at least one cutting edge upon removal or pressure from the die.

One of ordinary skill in the art would not have been motivated to modify the die of Ehlscheid with an ejection foam of a steel rule die, as discussed in the “Background” section of the above-referenced application, because such an ejection foam would cause cutouts to be

immediately ejected from the die. Ehlscheid, by way of contrast, describes a die which includes holes that are configured for use with a drum to facilitate retention of cutouts within the die for a time (by a vacuum), and subsequent ejection of cutouts from the die. Thus, one of ordinary skill in the art would not have been motivated to combine an ejection foam for a steel rule die with the die taught in Ehlscheid. Col. 4, lines 27-30.

In addition, Ehlscheid teaches away from such subject matter by teaching that “[t]he cut-out window is initially retained by a vacuum,” then, only “after it leaves the cutting position[,] it is blown into a bin . . .” Col. 4, lines 27-30.

Moreover, if the die of Ehlscheid were modified to include an ejection element of the type recited in claim 2, the die of Ehlscheid would not work as intended. More specifically, a cutout could not be initially held within the confines of and, thus, laterally adjacent to, the cutting edge of that die, as required by Ehlscheid.

Therefore, Ehlscheid cannot be used to establish a *prima facie* case of obvious against any of claims 2-5, 9, 10, 13-16, 19-22, 24, 25, and 30-33. Thus, one of ordinary skill in the art would not have been motivated to modify the teachings of Ehlscheid in the manner would render claim 2 or claim 19 obvious.

Claims 3 and 20 are further allowable because Ehlscheid does not teach or suggest at least one ejection element that comprises at least one compressible, resilient member.

Claims 4 and 31, which depend from claim 3 and 20, respectively, are also allowable since Ehlscheid lacks any teaching or suggestion of at least one ejection element that comprises foam.

Claims 2-5, 9, 10, 13-16, 19-22, 24, 25, and 30-33 are additionally allowable on the bases of several secondary indicia of nonobviousness, including commercial success and long-felt need.

A “Declaration of Eric J. Ruff,” which explains and evidences the commercial success of the dies recited in claims 2-5, 9, 10, 13-16, 19-22, 24, 25, and 30-33, is enclosed herewith. In addition, the “Declaration of Eric J. Ruff” explains the interest that the success of dies that fall within the scopes of claims 2-5, 9, 10, 13-16, 19-22, 24, 25, and 30-33 has generated among the

competitors of the assignee of the above-referenced application, providing further evidence of both commercial success and the fulfillment of a long-felt need: compact, substantially rigid portable dies that may be purchased and used by any consumer.

In view of the foregoing, it is respectfully submitted that, under 35 U.S.C. § 103(a), each of claims 2-5, 9, 10, 13-16, 19-22, 24, 25, and 30-33 recites subject matter which is allowable over the teachings of Ehlschied. Accordingly, it is respectfully requested that the 35 U.S.C. § 103(a) rejections of each of these claims be withdrawn.

New Claims

New claims 36-77 have been added. Of these, new claims 36, 48, and 62 are independent claims.

New independent claim 36 is drawn to a die that includes a substantially planar plate having a thickness and edges that are configured for handling by an individual. In addition the die of new independent claim 36 includes at least one cutting edge that protrudes from a surface of the substantially planar plate a distance of about 0.015 inch to about 0.02 inch.

As discussed during the Examiner's Interview, both the configuration of the substantially planar plate (thickness and edges configured for handling by an individual) and the distance the cutting edge protrudes therefrom render the die of new independent claim 36 unique over Ehlscheid. The 0.5 mm die thickness described in Ehlscheid is in line with the typical 19 and 23 mil steel thicknesses that are standard in dies that are configured for use with industrial rotary presses. The backings of such dies (0.2 mm, or 8 mils, in Ehlscheid) are so thin that the backings are flexible to facilitate storage in a flat orientation, as well as conformation to the curvature of a drum of a rotary press. In addition, the thin backings of conventional dies for industrial rotary presses have razor sharp edges, and are notorious for cutting even trained handlers.

New claims 37-47 depend either directly or indirectly from new independent claim 36.

New independent claim 48 recites a die that includes a portable, substantially rigid, substantially planar plate, as well as at least one cutting edge that protrudes from a surface of the substantially planar plate.

As discussed during the Examiner's Interview, dies of the type described in Ehlscheid, which have backings that are at most about 8 mils thick, are typically somewhat flexible to facilitate their placement on and conformation to the curvature of the drums of industrial rotary presses, yet allow them to be stored flat. In contrast, the die of new independent claim 48 includes a substantially planar plate that is substantially rigid and would, therefore, not be suitable for use with an industrial rotary press.

New claims 49-61 depend directly or indirectly from new independent claim 48.

Of these, new claim 61 is also directed to subject matter that was discussed during the Examiner's Interview as potentially being novel and nonobvious over the subject matter disclosed in Ehlscheid. In particular, new claim 49 recites that all regions of a back side of the substantially planar plate that are located opposite the at least one cutting edge are configured to be concurrently and completely supported by a substantially planar surface of a portable die cutting apparatus as pressure is applied to all of the at least one cutting edge. Ehlscheid neither expressly or inherently describes, nor teaches or suggests that the portions of the backings of the dies disclosed therein that are located opposite the cutting edges are configured to be concurrently supported by a substantially planar surface of a portable die cutting apparatus as pressure is being applied to all of the cutting edges. Rather, the description of Ehlscheid is limited to use of the dies described therein with industrial rotary presses, in which only portions of cutting edges located in a small linear portion of each die are supported by a curved surface of a rotary press at any given point in time—pressure is not applied to all of any cutting edge of the die at a given point in time, or simultaneously.

New independent claim 62 is directed to a die that includes a substantially planar plate and a cutting edge protruding from a front side of the substantially planar die. The substantially planar plate also includes a back side configured to be supported by a substantially planar die supporting surface of a portable press. A thickness of the substantially planar plate is configured to maintain the substantial planarity of the substantially planar plate when it is not supported by the substantially planar die supporting apparatus. The cutting edge is configured cut through a sheet of material as pressure is applied to said back side of said substantially planar plate.

The die of new independent claim 62 differs from the die disclosed in Ehlscheid in several respects. Ehlscheid lacks any express or inherent description, or teaching or suggestion of a die that includes a backing with a surface that is configured to be supported by a substantially planar die supporting surface. Ehlscheid also lacks any express or inherent description, or teaching or suggestion of a backing that is configured to maintain its substantial planarity when left supported; rather, the die of Ehlscheid, which is formed from a “foil,” has a backing with a thickness that would render the die somewhat flexible.

New claims 63-77 depend directly or indirectly from claim 62.

Of these, new claim 63 recites features that are also novel over those of the die disclosed in Ehlscheid. In particular, Ehlscheid does not expressly or inherently describe, teach, or suggest a die that includes a cutting edge that is configured cut through a sheet of material as pressure is applied to a back side of the backing of the die. Instead, the disclosure of Ehlscheid is limited to dies that are configured for use with conventional industrial rotary presses. It is well known in the art that dies that are configured for use such presses are precisely dimensioned so that when a first drum carries them through the closest point to another, oppositely rotating drum of an industrial rotary press, the razor sharp cutting edges of such dies will cut completely through a sheet of material without contacting the other drum which carries the sheet of material. New claim 63, in contrast, recites that the at least one cutting edge of the die of claim 62 “is configured to cut through the sheet of material as [the] cutting edge is forced against a substantially rigid support.”

New claim 64, which depends from new claim 63, further recites that the cutting edge is configured to cut through the sheet of material as the cutting edge is forced against a support formed from a material that is softer than the material from which the cutting edge is formed. Ehlscheid includes no such disclosure, teaching, or suggestion.

It is respectfully submitted that none of new claims 36-77 introduces new matter into the above-referenced application.

CONCLUSION

It is respectfully submitted that each of claims 1-77 is allowable. An early notice of the allowability of each of these claims is respectfully solicited, as is an indication that the above-referenced application has been passed for issuance. If any issues preventing allowance of the above-referenced application remain which might be resolved by way of a telephone conference, the Office is kindly invited to contact the undersigned attorney.

Respectfully submitted,



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Enclosure: Declaration of Eric J. Ruff

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